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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,776	06/29/2001	Wolfgang Horn	00 P 14945 US	8889

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PATENT DEPARTMENT
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EXAMINER

PHAM, THOMAS K

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 04/20/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/896,776

Applicant(s)

HORN ET AL.

Examiner

Thomas K Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Response to Amendment

1. This action is in response to request for re-consideration filed on 2/2/2004.
2. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 2/2/2004 prompted the new ground(s) of rejection presented in the following Office action.

DETAILED ACTION

Priority

3. Acknowledgment is made of papers submitted under 35 U.S.C. 119(a)-(d) which applicant's claim for foreign priority based on applications 1003791.0 and 10037990.7 filed in German on August 3rd 2000 and applications 10055168.8 and 10055169.6 filed in German on November 8th 2000 have been placed of record in the file.

Statements of Statutory 35 USC

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim Rejections - 35 USC § 102

6. Claims 16-19, 21-23 and 25-26, 30 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Stripf et al. U.S. Patent no. 6,263,487 (hereinafter Stripf).

Regarding claim 16

Stripf teaches an industrial controller comprising a plurality of devices, for use in controlling a system including a plurality of components, the controller comprising:

- control means independent of the controlled components (fig. 1, elements 6 is separate from elements 8 and 9) and
- component control means relating to the controlled components for supplementing the control means (col. 2 lines 3-6, “Manufacturing sites 1, 2 each ... devices 8 and workstations 9”), the component control means implemented using a plurality of technology objects corresponding to the components, the technology objects distributable on the devices (col. 2 lines 16-26, “the software function blocks ... them during control operation”).

Regarding claim 17

Stripf teaches

- automatically generated communications links between at least two of the technology objects (col. 2 lines 22-26, “the programmable controller ... them during control operation”).

Regarding claim 18

Stripf teaches

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- technology objects comprise attributes taken into account in the generation of the communications links (col. 2 lines 13-22, “These software function blocks ... expandable over the Internet”).

Regarding claim 19

Stripf teaches

- technology objects are distributable on a plurality of devices within a project, the project relating to plurality of control units (col. 3 lines 43-49, “The distributed automation ... control program while it is running”).

Regarding claim 21

Stripf teaches

- the technology object types permit technological scaling of the functionality of the controller (col. 3 lines 39-42, “To reduce the number ... intelligent field units”).

Regarding claim 22

Stripf teaches

- technology objects are interleaved to form container objects (col. 2 lines 9-13, “An important requirement ... during control operation”).

Regarding claim 23

Stripf teaches

- further adapted to provide a plurality of views of the technology objects to a user (col. 2 lines 47-57, “With a programming unit ... of different architectures”).

Regarding claim 25

Stripf teaches

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- technology objects are represented in the engineering system by graphical elements (col. 34-10, "The object-oriented software function ... the management engineering system").

Regarding claim 26

Stripf teaches

- the technology objects have types and the technology object types are clustered into one or more technology packages (col. 2 lines 57-62, "On a user level ... process the code directly").

Regarding claim 30

Stripf teaches a method for programming an industrial controller for a technical process, the method comprising the steps of:

- selecting a plurality of technology objects relevant to a desired application (col. 2 lines 47-51, "With a programming unit ... objective to be achieved");
- interleaving the selected technology objects to form technology objects having complex functionality (col. 2 lines 9-13, "An important requirement ... during control operation");
- and
- distributing the interleaved technology objects onto a device (col. 3 lines 43-49, "The distributed automation ... control program while it is running").

Regarding claim 32

Stripf teaches a system for programming an industrial controller, comprising:

- an industrial control system (col. 2 lines 3-6, "Manufacturing sites ... and workstations 9);

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- means for selecting a plurality of technology objects relevant to a desired application (col. 2 lines 47-51, "With a programming unit ... objective to be achieved");
- means for interleaving the selected technology objects to form technology objects having complex functionality (col. 2 lines 9-13, "An important requirement ... during control operation"); and
- means for distributing the interleaved technology objects onto a plurality of devices (col. 3 lines 43-49, "The distributed automation ... control program while it is running").

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stripf in view of Sadre et al. U.S. Patent no. 5,485,620.

Regarding claim 20

Stripf teaches an industrial controller according to claim 16 with the technology objects is distributed among control units but does not teach the functionality of the technology objects is distributed among control units in equidistant communication with one another in real time with clock synchronization. However, Sadre et al. teaches synchronization of the operation units in real time sequential continuous programming manner (col. 12 lines 50-60, "The Transfer Line ... control unit 2."). Therefore, it would have been obvious to one of ordinary skill in the art at the

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time the invention was made to incorporate the synchronization of Sadre et al. with the controller of Stripf because it would provide for controlling all the units connect in an industrial process effectively and orderly.

9. Claims 24, 27-29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stripf.

Regarding claim 24

Stripf teaches an industrial controller according to claim 16 with programming of a technology object but does not teach further adapted for feedback-free programming of a technology object with respect to the other technology objects and the control means. However, Stripf teaches or suggests a programming technique that involved feedback of the function blocks. Therefore, it is obvious to one of ordinary skill in the art to consider Stripf controller adapted for feedback-free programming of a technology object with respect to other technology objects and the control means.

Regarding claim 27

Stripf teaches a method of programming an industrial control system comprising a plurality of devices, the controller being programmed for one or more projects and comprising a plurality of technology objects, the method comprising the steps of: providing a technology-neutral control system (col. 2 lines 34-40, "The portability of the code ... of the programmable controller"); interleaving of the technology objects to form a set of complex technology objects (col. 2 lines 9-13, "An important requirement ... during control operation"); distributing a plurality of the technology objects on a plurality of the devices (col. 3 lines 43-49, "The distributed automation ... control program while it is running") but does not teach reusing at least one of the complex

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technology objects in a second project. However, Stripf teaches the software objects can be supplements or modifies as needed by the programming units 7 (col. 3 lines 13-21, “In the event that blocks ... simulation of the control program”). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that Stripf is reusing at least one of the software objects for different projects with slight modification if needed in order to meet the new requirement of the new projects.

Regarding claim 28

Stripf teaches attributes of the technology objects are taken into account in generating the communication channels (col. 2 lines 13-22, “These software function blocks ... expandable over the Internet”).

Regarding claim 29

Stripf teaches a method of programming an industrial control system comprising a plurality of devices, the controller being programmed for one or more projects and comprising a plurality of technology objects, the method comprising the steps of: providing a technology-neutral control system (col. 2 lines 34-40, “The portability of the code ... of the programmable controller”); instantiating the technology objects (col. 2 lines 47-51, “a user creates a control ... objective to be achieved”); interleaving the technology objects to form a set of complex technology objects for a first project (col. 2 lines 9-13, “An important requirement ... during control operation”); distributing the technology objects on a plurality of the devices (col. 3 lines 43-49, “The distributed automation ... control program while it is running”); generating communication channels between the technology objects (col. 2 lines 13-22, “These software function blocks ... expandable over the Internet”) but does not teach reusing at least one of the complex technology

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objects in a second project. However, Stripf teaches the software objects can be supplements or modifies as needed by the programming units 7 (col. 3 lines 13-21, "In the event that blocks ... simulation of the control program"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that Stripf is reusing at least one of the software objects for different projects with slight modification if needed in order to meet the new requirement of the new projects.

Regarding claim 31

Stripf teaches the software objects can be supplements or modifies as needed by the programming units 7 (col. 3 lines 13-21, "In the event that blocks ... simulation of the control program"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that Stripf is reusing at least one of the interleaved software objects for different projects with slight modification if needed in order to meet the new requirement of the new projects.

Response to Arguments

10. Applicant's arguments with respect to claims 16-32 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

11. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 2/2/2004 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (703) 305-7587 and fax number is (703) 746-8874. The examiner can normally be reached on Monday-Thursday and every other Friday from 7:30AM- 5:00PM EST or contact Supervisor, *Mr. Anthony Knight*, can be reached on (703) 308-3179.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Thomas Pham
Patent Examiner

TP

April 19, 2004


Anthony Knight
Supervisory Patent Examiner
Group 3600